

Notice of Allowability

Application No.

09/350,152

Examiner

Taylor Victor Oh

Applicant(s)

GARRAIT ET AL.

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/5/04.
2. ☒ The allowed claim(s) is/are 15-16, 21, 24-33, 35-38, and 40-41, as renumbered in claims 1-19.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Examiner's Amendment and Reasons of Allowance

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with an attorney of record, Lori-Ann Johnson on 6/23/2004 .

I. The application has been amended as follows:

Claim 39 has been canceled.

II. The following is an examiner's statement of reasons for allowance:

- The close references for the current invention are Suchsland et al (U.S. 5,847,207) and Hsu et al (U.S. 5,856,567).

Suchsland et al discloses a process for producing 2-hydroxy-4-methylthiobutyric acid by hydrolyzing 2-hydroxy-4-methylthiobutyronitrile (MMP-CH) in the following steps:

- a. mixing 80 g 98 % sulfuric acid (0.8 mole) diluted with 40 g water (2.2 mole) with 98.6% 2-hydroxy-4-methylthiobutyronitrile (MMP-CH) (1 mole) at 50° C.,
- b. adding 75 g water (40.2 %) to the intermediate MHA amide, and

Art Unit: 1625

c. heating the mixture to 100-120⁰ C. and evaporating the resultant mixture ,
thereby obtaining the desired MHA product .

Hsu et al teaches a process for preparing 2-hydroxy-4-methylthiobutyric acid by introducing 2-hydroxy-4-methylthiobutyronitrile and an aqueous mineral acid into a nitrile hydrolysis reactor at a temperature of from 40 to 60⁰ C. and feeding the nitrile hydrolysis reactor product steam containing the intermediate MHA amide into an amide hydrolysis flow reactor at a temperature of from 60 to 100⁰ C. at a pressure of from 0 to 1 bar .

However, the present invention differs from the prior art in that the claimed hydrating step (a) is carried out under the condition that the reaction medium contains more than 98 % by weight 2-hydroxy-4-methylthiobutyramide at a pressure range between 0.01 and 3 bar, and the claimed excess water is recycled and used in the hydrolyzing step (b), and the claimed concentrated feed stream contains 50 or 80 wt. % 2-hydroxy-4-methylthiobutyronitrile (MMP-CH). Furthermore, there is no motivation to introduce Hsu et al's indirect teaching of removing water during the nitrile hydrolysis into the hydration step of the Suchland process because the Hsu process would be motivated to increase the water content because of the ratio of sulfuric acid to nitrile in Suchland being below 1.0. In addition, unless all limitations of the claims are met, there is no prior art rejection. See In re Zurko 59 USPQ 2d 1690 (Fed Cir. 1991) and In re Lee, 61 USPQ 1430 (Fed Cir. 1991).

Therefore, the claimed invention would not have been obvious to the person with an ordinary skill in the art.

Art Unit: 1625

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning the communication after allowance such as sending all post-allowance correspondence should be directed to "Box Issue Fee" or faxed directly to PUBS at 703-305-8755. This will expedite the process of these papers.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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6/23/04



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